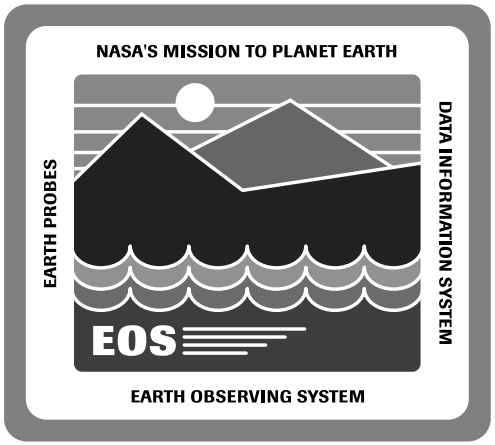
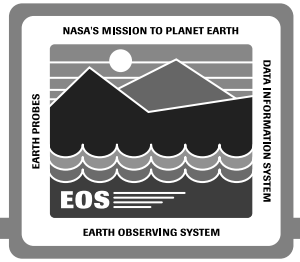


DCE to OMG Migration

Tom Herron

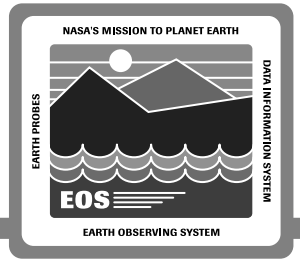
18 January 1995

Background



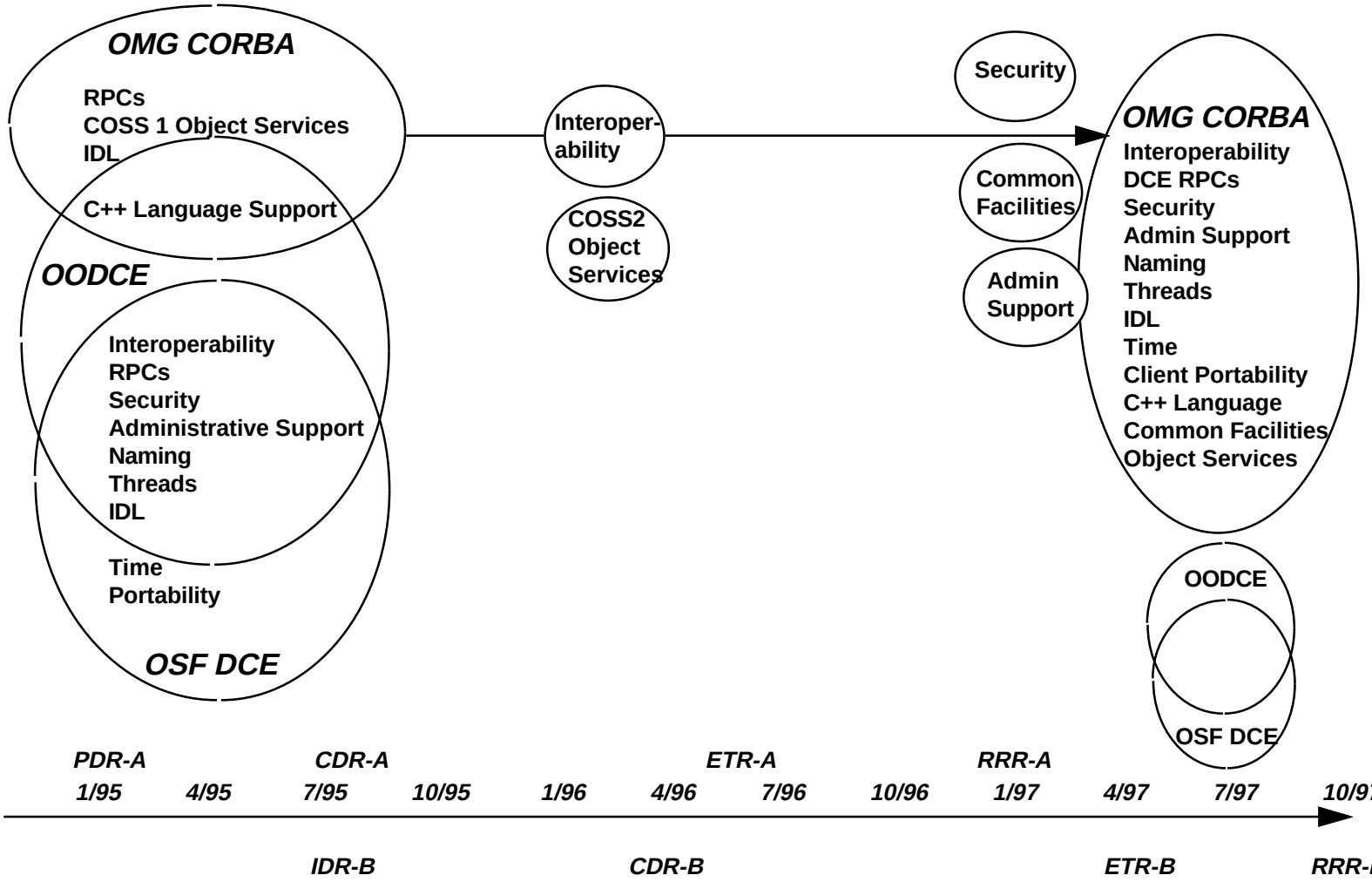
- **CSMS baseline per the SDS for Rel A is a communications infrastructure based on DCE**
- **Migration to CORBA 2.0 in later releases**
- **Encapsulate DCE to simplify change from DCE to CORBA and to isolate the application developers from technology change.**
- **A key CSMS PDR-A goal was to decide how to accomplish this encapsulation**
- **CSMS EP4 prototyping activities included evaluation of a pre-release ORB product and a released DCE encapsulation product**

Definitions



- **OSF DCE - is today's state-of-the-art solution for industrial-strength, vendor-independent, distributed enterprise computing. It is a widely available multi-vendor client/server communications environment integrated with security, administrative support and directory services.**
- **OMG CORBA - plus affiliated object and common-facility services, if successful in the market place, can offer significant advantages over DCE to the long-term GCDIS/UserDIS architecture. It will provide a multi-vendor interoperable distributed object development environment.**
- **HP OODCE - is a DCE development environment that provides a C++ class library and a DCE Interface Definition Language (IDL)-to-C++ compiler. OODCE enables developers to build object-oriented, DCE applications by automating the packaging of DCE services as C++ objects. OODCE encapsulates many of the complex DCE syntax and commands into powerful, easy-to-use objects.**

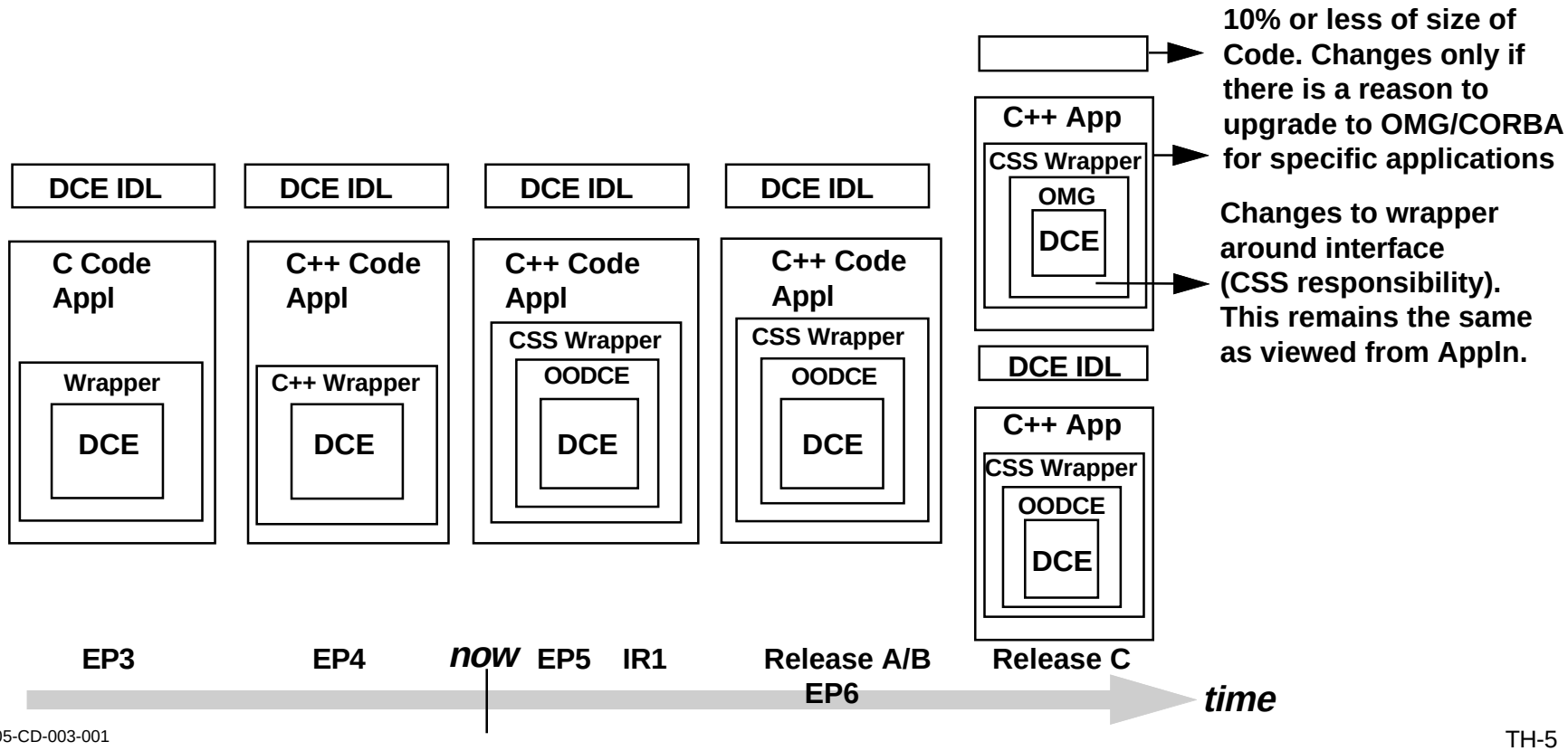
Distributed Computing Technology Evolution



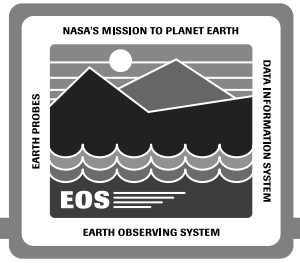
Migration Approach

Migration strategy includes:

- **coexistance of new OMG/CORBA applications with OODCE applications**
- **wrapping of OODCE objects with OMG /CORBA interfaces**
- **reengineering of OODCE applications to use new features**



OODCE Summary

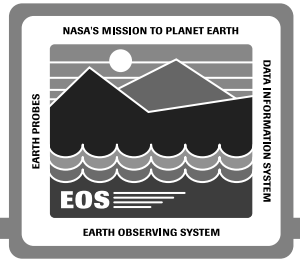


Benefits

- **OODCE simplifies DCE application development**
- **OODCE provides C++ support for distributed computing over DCE**
- **Retains interface to C, and to existing DCE implementation**
- **Implementation through simple library, little performance degradation**
- **Provides C++ Interface to DCE communication, naming, threads and security services**
- **Provides abstraction and data encapsulation that improve development time and reuse**
- **DCE Security, maturity and administration features fulfill critical needs for near term enterprise computing applications.**

Full detail regarding OODCE Selection Trade is available in the Technical Paper of CSMS Trades

OODCE Summary (cont.)



Prototypes for Additional Risk Mitigation:

- **CSS plans to continue prototyping ORBs through CDR and will revisit the decision regarding OMG insertion timeframe**
- **Proof of Concept prototype of wrapped-ORB/wrapped-OODCE planned by CDR**